

# Recent IBM patents

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*The following patents were recently issued by the countries in which the inventions were made. For U.S. patents, titles and names supplied to us by the U.S. Patent Office are reproduced exactly as they appear on the original published patent.*

## France

|         |                                                                     |                                                                                                  |
|---------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 365,730 | D. Omet and S. LeForestier                                          | High Gain, High Speed BiCMOS Sensing for SRAM                                                    |
| 365,731 | B. Naudin, J. Calvignac, J. M. Millet, J. M. Munier, and J. P. Lips | Mechanism for Transferring Messages Between Source and Destination Users Through a Shared Memory |
| 392,126 | C. Galand and M. Rosso                                              | Fast Pitch Tracking Process for LTP-Based Speech Coders                                          |
| 394,599 | P. Huon and R. Glaise                                               | Circuit for Synchronizing Data Transfers Between Two Devices Operating at Different Speeds       |

## Germany

|              |                                                                                |                                                    |
|--------------|--------------------------------------------------------------------------------|----------------------------------------------------|
| 4,244,275.3  | G. Gervais, G. Zilles, H. Kohler, I. Holm, N. Schumacher, and T. G. Koehler    | Data Integrity Check in Buffered Data Transmission |
| 68,916,784.9 | E. Klink, H. Schettler, K. Kroell, O. Wagner, R. Stahl, T. Ludwig, and W. Haug | Integrated Circuit Package                         |

## Switzerland

|         |                                                                     |                                                                                                  |
|---------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 363,550 | C. W. Schneiker and D. W. Pohl                                      | Distance-Controlled Tunneling Transducer and Direct Access Storage Unit Employing the Transducer |
| 442,536 | D. Pohl, G. K. Binnig, H. Rohrer, J. K. Gimzewski, and U. T. Duerig | Atomic Force Sensor Head for Measuring the Properties of a Data Store                            |

## United Kingdom

|           |                                           |                                                                       |
|-----------|-------------------------------------------|-----------------------------------------------------------------------|
| 329,892   | R. T. Wood                                | Display System Comprising a Windowing Mechanism                       |
| 462,333   | C. C. Pietrzak and J. S. Beeteson         | Display System                                                        |
| 2,037,957 | M. D. Oates                               | Workstation                                                           |
| 2,248,145 | A. N. Other, D. Sawdon, and D. J. Whittle | A Contact Device for Connecting Coax Cable to a Non-Coaxial Connector |

## United States

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|-----------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 5,280,452 | S. H. Dhong and L. M. Terman                                                         | Power Saving Sensing Circuits for Dynamic Random Access Memory                              |
| 5,280,480 | D. A. Pitt and K. A. Preiss                                                          | Source Routing Transparent Bridge                                                           |
| 5,280,485 | M. M. Blaum and J. Bruck                                                             | Coding Method for Skewed Transition Detection in Parallel Asynchronous Communication System |
| 5,280,489 | L. J. Fredrickson, R. Karabed, J. W. Rae, P. H. Siegel, H. K. Thapar, and R. W. Wood | Time-Varying Viterbi Detector for Control of Error Event Length                             |

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|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5,280,533 | M. M. Blaum and J. Bruck                                                                                                                                                                                                                                      | Coding Method for Skewed Transition Correction in Parallel Asynchronous Communication Systems                                                                       |
| 5,280,535 | F. Gfeller, H. Jaeckel, and H. Meier                                                                                                                                                                                                                          | Semiconductor Laser Diode Deposited on a Structured Substrate Surface                                                                                               |
| 5,280,562 | L. R. Bahl, J. R. Bellegarda, E. A. Epstein, J. M. Lucassen, D. Nahamoo, and M. A. Picheny                                                                                                                                                                    | Speech Coding Apparatus with Single-Dimension Acoustic Prototypes for a Speech Recognizer                                                                           |
| 5,280,580 | W. B. Brooks, M. A. Hoffstatter, R. S. Manka, and R. I. Miller                                                                                                                                                                                                | System Service Request Processing in Multiprocessor Environment                                                                                                     |
| 5,280,588 | J. J. D'Ambrose, W. K. Shetterly, S. Thompson, and M. R. Turner                                                                                                                                                                                               | Multiple Input/Output Devices Having Shared Address Space                                                                                                           |
| 5,280,591 | A. Garcia, C. S. McDowell, and W. Sieh                                                                                                                                                                                                                        | Centralized Backplane Bus Arbiter for Multiprocessor Systems                                                                                                        |
| 5,280,593 | R. J. Bullions III, R. F. Hill, S. J. Nadas, and R. J. Pedersen                                                                                                                                                                                               | Computer System Permitting Switching Between Architected and Interpretation Instructions in a Pipeline by Enabling Pipeline Drain                                   |
| 5,280,607 | J. Bruck, R. E. Cypher, and C.-T. Ho                                                                                                                                                                                                                          | Method and Apparatus for Tolerating Faults in Mesh Architectures                                                                                                    |
| 5,280,609 | M. G. MacPhail                                                                                                                                                                                                                                                | Methods of Selecting Document Objects for Documents Stored in a Folder Format within an Electronic Information Processing System                                    |
| 5,280,611 | C. Mohan, I. S. Narang, and J. Z. Teng                                                                                                                                                                                                                        | Method for Managing Database Recovery from Failure of a Shared Store in a System Including a Plurality of Transaction-Based Systems of the Write-Ahead Logging Type |
| 5,280,612 | R. A. Lorie, C. Mohan, and M. H. Pirahesh                                                                                                                                                                                                                     | Multiple Version Database Concurrency Control System                                                                                                                |
| 5,280,614 | S. J. Munroe, J. G. Ranweiler, and G. D. Timms, Jr.                                                                                                                                                                                                           | Apparatus and Method for Controlling Access to Data Using Domains                                                                                                   |
| 5,280,616 | N. D. Butler, M. D. Buttimer, B. C. Homewood, S. P. Larky, R. M. West, and P. G. Sidoli                                                                                                                                                                       | Logic Circuit for Task Processing                                                                                                                                   |
| 5,281,025 | M. F. Cali and P. A. Chalco                                                                                                                                                                                                                                   | Temperature Sensing Device for Dynamically Measuring Temperature Fluctuation in a Tip of a Bonding Device                                                           |
| 5,281,150 | E. G. Bundga, M. D. Dinardo, J. A. Knight, and L. J. Konrad III                                                                                                                                                                                               | Method and Apparatus for Connecting Cable to the Surface of Printed Circuit Boards or the Like                                                                      |
| 5,281,447 | M. J. Brady, S. L. Buchwalter, R. J. Gambino, M. J. Goldberg, K. L. Lee, and A. Viehbeck                                                                                                                                                                      | Patterned Deposition of Metals Via Photochemical Decomposition of Metal-Oxalate Complexes                                                                           |
| 5,281,485 | E. G. Colgan and P. M. Fryer                                                                                                                                                                                                                                  | Structure and Method of Making Alpha-Ta in Thin Films                                                                                                               |
| 5,281,543 | T. Fukuzawa and H. Munekata                                                                                                                                                                                                                                   | Fabrication Method for Quantum Devices in Compound Semiconductor Layers                                                                                             |
| 5,281,723 | N. R. Bantu, A. C. Bhatt, R. W. Keesler, K. Papathomas, T. D. Sinclair, and J. J. Wagner                                                                                                                                                                      | Propylene Carbonate Recovery Process                                                                                                                                |
| 5,281,754 | P. W. Farrett and D. J. Moore                                                                                                                                                                                                                                 | Melody Composer and Arranger                                                                                                                                        |
| 5,281,931 | J. A. Bailey and P. H. Francois                                                                                                                                                                                                                               | On-Chip Self-Tuning Filter System                                                                                                                                   |
| 5,282,063 | J. J. Deacon and A. D. Edgar                                                                                                                                                                                                                                  | Method and Apparatus for Automatic Brightness and Contrast Control in an Image Capture System                                                                       |
| 5,282,105 | J. H. Eaton, J. K. Spong, and J. L. Teale                                                                                                                                                                                                                     | Compound Radius Guide Post                                                                                                                                          |
| 5,282,147 | J. W. Goetz and D. J. Hathaway                                                                                                                                                                                                                                | Method and Apparatus for Optimizing a Logic Network                                                                                                                 |
| 5,282,197 | S. S. Kreitzer                                                                                                                                                                                                                                                | Low Frequency Audio Sub-channel Embedded Signalling                                                                                                                 |
| 5,282,199 | L. P. Herzberg, B. V. Patel, A. Ruiz, F. A. Schaffa, and M. H. Willebeck-LeMair                                                                                                                                                                               | Method and Apparatus for Interoperation of FDDI-I and FDDI-II Networks                                                                                              |
| 5,282,210 | T. J. Slegel, C. A. Reed, K. D. Lamb, and D. H. Friedberg                                                                                                                                                                                                     | Time-Division-Multiplexed Data Transmission System                                                                                                                  |
| 5,282,216 | A. M. Patel, R. A. Rutledge, and B. S. So                                                                                                                                                                                                                     | High Data Rate Decoding Method for Coding Signal Processing Channels                                                                                                |
| 5,282,274 | L. Liu                                                                                                                                                                                                                                                        | Translation of Multiple Virtual Pages Upon a TLB Miss                                                                                                               |
| 5,282,308 | M.-M. Chen, K. Ju, R. E. Lee, and C. Tsang                                                                                                                                                                                                                    | Thin Film Planarization Process for Fabricating Magnetic Heads Employing a Stitched Pole Structure                                                                  |
| 5,282,924 | T. Bayer and J. Greschner                                                                                                                                                                                                                                     | Micromechanical Sensor Fabrication Process                                                                                                                          |
| 5,282,925 | S.-J. Jeng, W. C. Natzle, and C. Yu                                                                                                                                                                                                                           | Device and Method for Accurate Etching and Removal of Thin Film                                                                                                     |
| 5,283,104 | F. Y. Aoude, E. I. Cooper, P. R. Duncombe, S. Farooq, E. A. Giess, Y.-H. Kim, S. H. Knickerbocker, F. Muller-Landau, M. O. Neisser, J. M. Park, R. R. Shaw, R. A. Rita, T. M. Shaw, R. Vallabhaneni, J. A. Van Hise, G. F. Walker, J. Kim, and J. M. Brownlow | Via Paste Compositions and Use Thereof to Form Conductive Vias in Circuitized Ceramic Substrates                                                                    |
| 5,283,107 | T. Bayer, J. Greschner, W. Hildenbrand, B. Marquart, R. R. Stöhr, and O. Wolter                                                                                                                                                                               | Modular Multilayer Interwiring Structure                                                                                                                            |

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| 5,283,208 | M. J. Lorsung and C. J. Mathison                                                                                                                | Method of Making a Submicrometer Local Structure Using an Organic Mandrel                                                                                                                    |
| 5,283,396 | M. D. Donner and E. Feig                                                                                                                        | Calibration of a Rotationally Scanning Position-Tracking Device                                                                                                                              |
| 5,283,437 | J. Greschner, M. Nonnenmacher, and O. Wolter                                                                                                    | Pneumatically and Electrostatically Driven Scanning Tunneling Microscope                                                                                                                     |
| 5,283,442 | Y. Martin, J. Poler, and H. K. Wickramasinghe                                                                                                   | Surface Profiling Using Scanning Force Microscopy                                                                                                                                            |
| 5,283,453 | T. Rajeevakumar                                                                                                                                 | Trench Sidewall Structure                                                                                                                                                                    |
| 5,283,456 | C.-M. Hsieh, L. L. C. Hsu, and S. Ogura                                                                                                         | Vertical Gate Transistor with Low Temperature Epitaxial Channel                                                                                                                              |
| 5,283,559 | P. W. Kalendra and W. J. Piazza                                                                                                                 | Automatic Calibration of a Capacitive Touch Screen Used with a Fixed Element Flat Screen Display Panel                                                                                       |
| 5,283,561 | L. Lumelsky, D. H. McCabe, and A. W. Peevers                                                                                                    | Color Television Window for a Video Display Unit                                                                                                                                             |
| 5,283,704 | J. R. Reidenbach                                                                                                                                | Rotary Actuator for Disk Drive Assemblies                                                                                                                                                    |
| 5,283,755 | R. A. Bechade                                                                                                                                   | Multiplier Employing Carry Select or Carry Look-Ahead Adders in Hierarchical Tree Configuration                                                                                              |
| 5,283,859 | P. Quarendon and S. J. P. Todd                                                                                                                  | Method of and System for Generating Images of Object Transforms                                                                                                                              |
| 5,283,860 | M. A. Einkauf, J. R. Rossignac, M. T. Vanover, and J. Wu                                                                                        | System and Method for Displaying Trimmed Surfaces Using Bitplane Masking                                                                                                                     |
| 5,283,861 | M. K. Dangler and S. L. Wentz                                                                                                                   | Remote Control of a Local Processor Console                                                                                                                                                  |
| 5,283,868 | E. D. Baker, J. M. Dinwiddie, Jr., L. E. Grice, J. M. Joyce, J. M. Loffredo, and K. R. Sanderson                                                | Providing Additional System Characteristics to a Data Processing System Through Operations of an Application Program, Transparently to the Operating System                                  |
| 5,283,884 | J. M. Menon, J. E. Lindley, and R. W. Shomler                                                                                                   | CKD Channel with Predictive Track Table                                                                                                                                                      |
| 5,283,888 | V. D. Dao and J. A. Kusnitz                                                                                                                     | Voice Processing Interface Unit Employing Virtual Screen Communications for Accessing a Plurality of Primed Applications                                                                     |
| 5,283,897 | L. Georgiadis, C. N. Nikolaou, and G. W. Wang                                                                                                   | Semi-Dynamic Load Balancer for Periodically Reassigning New Transactions of a Transaction Type from an Overload Processor to an Under-utilized Processor Based on the Predicted Load Thereof |
| 5,283,899 | J. A. Cook, G. A. Flurry, and L. W. Henson                                                                                                      | First-In/First-Out Buffer Queue Management for Multiple Processes                                                                                                                            |
| 5,283,942 | M.-M. Chen, J.-S. J. Lo, and P.-K. Wang                                                                                                         | Sacrificial Layer Planarization Process for Fabricating a Narrow Thin Film Inductive Head                                                                                                    |
| 5,284,286 | P. J. Brofman, S. Farooq, K. A. Lidestri, G. B. Monjeau, and K. J. Puttlitz                                                                     | Porous Metal Block for Removing Solder or Braze from a Substrate and a Process for Making the Same                                                                                           |
| 5,284,308 | W. T. Comeaux, D. G. East, S. L. Felde, and D. W. Johnson                                                                                       | Tape Path Having Implicit Squeeze Bearing                                                                                                                                                    |
| 5,284,549 | M. S. Barnes, M. M. Chow, J. C. Forster, M. A. Fury, C.-C. Kin, H. C. Jones, J. H. Keller, and J. A. O'Neill                                    | Selective Fluorocarbon-Based RIE Process Utilizing a Nitrogen Additive                                                                                                                       |
| 5,284,554 | M. Datta and L. T. Romankiw                                                                                                                     | Electrochemical Micromachining Tool and Process for Through-Mask Patterning of Thin Metallic Films Supported by Non-conducting or Poorly Conducting Surfaces                                 |
| 5,284,792 | T. Forster, C. Harder, A. Oosenbrug, and G. W. Rubloff                                                                                          | Full-Wafer Processing of Laser Diodes with Cleaved Facets                                                                                                                                    |
| 5,285,018 | W. E. Pence IV                                                                                                                                  | Power and Signal Distribution in Electronic Packaging                                                                                                                                        |
| 5,285,074 | D. F. Haire, C. T. Ho, G. O. Langner, W. Stickel, and E. V. Weber                                                                               | Dynamic Compensation of Non-linear Electron Beam Landing Angle in Variable Axis Lenses                                                                                                       |
| 5,285,099 | R. A. Carruthers, F. J. Dorleans, J. A. Fitzsimmons, R. Flitsch, J. A. Jubinsky, G. R. Larsen, G. C. Schwartz, P. J. Tsang, and R. W. Zielinski | SiCr Microfuses                                                                                                                                                                              |
| 5,285,118 | F. A. Montegari                                                                                                                                 | Complementary Current Tree Decoder                                                                                                                                                           |
| 5,285,143 | A. A. Bahr and T. R. Larson                                                                                                                     | Measurement of Load Current in a Multi-phase Power Amplifier                                                                                                                                 |
| 5,285,296 | H. Komooka, T. Matsuyama, and M. Mizuno                                                                                                         | Conversion of Color Display Data to Color Print Data                                                                                                                                         |
| 5,285,327 | S. R. Hetzler                                                                                                                                   | Apparatus for Controlling Reading and Writing in a Disk Drive                                                                                                                                |
| 5,285,337 | G. L. Best, M. M. Dovek, J. S. Foster, L. P. Franco, and A. M. Homola                                                                           | Liquid-Bearing Data Recording Disk File with Transducer Carrier Having Support Struts                                                                                                        |
| 5,285,339 | M.-M. Chen, K. Ju, M. T. Krounbi, C. H. Tsang, and P.-K. Wang                                                                                   | Magnetoresistive Read Transducer Having Improved Bias Profile                                                                                                                                |
| 5,285,340 | K. Ju and M. T. Krounbi                                                                                                                         | Thin Film Magnetic Head with Conformable Pole Tips                                                                                                                                           |
| 5,285,453 | A. J. Gruodis                                                                                                                                   | Test Pattern Generator for Testing Embedded Arrays                                                                                                                                           |
| 5,285,454 | M. M. Blaum and J. Bruck                                                                                                                        | Method and Apparatus for Encoding and Decoding Unordered Error Correcting Codes                                                                                                              |

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| 5,285,456 | D. P. Cheney, R. C. Lang, A. E. Petruski, M. J. Wolski, and R. J. Yagley                                                  | System and Method for Improving the Integrity of Control Information                                                                                            |
| 5,285,505 | J. Kim, G. J. Leibman, and C. C. Tappert                                                                                  | Method and Apparatus for Improving Prototypes of Similar Characters in On-line Handwriting Recognition                                                          |
| 5,285,526 | C. J. Bennett III, D. A. Foulger, E. M. Hesse, and D. W. Walsh                                                            | Method of Manipulating Elements of a Structured Document, Function Key Operation Being Dependent Upon Current and Preceding Image Element Types                 |
| 5,285,528 | C. A. Hart                                                                                                                | Data Structures and Algorithms for Managing Lock States of Addressable Element Ranges                                                                           |
| 5,286,331 | L. Chen, S.-J. Jeng, W. C. Natzle, and C. Yu                                                                              | Supersonic Molecular Beam Etching of Surfaces                                                                                                                   |
| 5,286,334 | S. Akbar, J. O. Chu, B. Cunningham, G. Fitzgibbon, and S. Ratanaphanyarat                                                 | Nonselective Germanium Deposition by UHV/CVD                                                                                                                    |
| 5,286,417 | I. S. Mahmoud and J. P. Partridge                                                                                         | Method and Composition for Making Mechanical and Electrical Contact                                                                                             |
| 5,286,572 | D. J. Clodgo, R. A. Previti-Kelly, R. R. Uttecht, and E. G. Walton                                                        | Planarizing Ladder-Type Silsequioxane Polymer Insulation Layer                                                                                                  |
| 5,286,599 | E. D. Babich, E. A. Galligan, J. D. Gelorme, R. P. McGouey, S. L. Nunes, J. R. Paraszczak, R. J. Serino, and D. F. Witman | Base Developable Negative Photoresist Composition and Use Thereof                                                                                               |
| 5,287,001 | P. Buchmann, P. Unger, P. Vettiger, and O. Voegeli                                                                        | Cooling Structures and Package Modules for Semiconductors                                                                                                       |
| 5,287,046 | G. D. Carpenter, R. E. Jansen, E. F. Plutowski, and J. J. Stephenson                                                      | Method and System for Actuator Control for Direct Access Storage Devices                                                                                        |
| 5,287,102 | F. A. McKiel, Jr.                                                                                                         | Method and System for Enabling a Blind Computer User to Locate Icons in a Graphical User Interface                                                              |
| 5,287,235 | E. A. Cunningham and R. F. Harwood                                                                                        | Slider Air Bearing Surface with Angled Rail Configuration                                                                                                       |
| 5,287,238 | P. M. Baumgart, B. Dieny, B. A. Gurney, J.-P. Nozieres, V. S. Speriosu, and D. R. Wilhoit                                 | Dual Spin Valve Magnetoresistive Sensor                                                                                                                         |
| 5,287,245 | S. A. M. Lucente, R. F. Sapper, A. Naitoh, S. Horikoshi, M. Kurihara, and K. Yoshihara                                    | Computer Having Ejectable Keyboard Ejected by Damping Device                                                                                                    |
| 5,287,267 | R. Jayaraman, R. Roundy, and R. Srinivasan                                                                                | Methods for Parts Procurement Quantity Determination Where Demand is Uncertain for the Product in Which the Parts are Used                                      |
| 5,287,271 | W. S. Rosenbaum                                                                                                           | Data Processing System for Optimized Mail Piece Sorting and Mapping to Carrier Walk Sequence Using Real Time Statistical Data                                   |
| 5,287,340 | D. B. Chapman, M. O. Jenkins, S. A. Jove, and J. C. L. van Peppen                                                         | Differential Amplifier for Optical Detectors in an Optical Data Storage System                                                                                  |
| 5,287,377 | T. Fukuzawa, L. Y. Liu, and E. E. Mendez                                                                                  | Coupled Quantum Well Tunable Laser                                                                                                                              |
| 5,287,407 | K. Holmes                                                                                                                 | Computer Software Protection                                                                                                                                    |
| 5,287,415 | T. E. Chefalas and C. C. Tappert                                                                                          | Elastic Prototype Averaging in Online Handwriting Recognition                                                                                                   |
| 5,287,444 | M. A. Enescu, J. Lum, R. L. Obermarck, and K. A. Shoens                                                                   | Message Processing System                                                                                                                                       |
| 5,287,447 | P. R. Miller, W. A. Miller, and J. K. Rayborn                                                                             | Method and System for Providing Container Object Attributes to a Non-container Object                                                                           |
| 5,287,456 | M. C. Rhodes and J. S. Wang                                                                                               | Communication System for Facilitating in Full Duplex Communication Mode and Without Previously Defining Sessions Between Sender and Receiver Programs           |
| 5,287,457 | R. K. Arimilli, S. Dhawan, J. O. Nicholson, and D. W. Siegel                                                              | Computer System DMA Transfer                                                                                                                                    |
| 5,287,459 | J. J. Gniewek                                                                                                             | Method and Apparatus for Reducing Response Time in Automated Library Data Retrieval Systems                                                                     |
| 5,287,467 | B. Blaner, T. L. Jeremiah, S. Vassiliadis, and P. G. Williams                                                             | Pipeline for Removing and Concurrently Executing Two or More Branch Instructions in Synchronization with Other Instructions Executing in the Execution Unit     |
| 5,287,473 | C. Mohan and I. S. Narang                                                                                                 | Non-blocking Serialization for Removing Data from a Shared Cache                                                                                                |
| 5,287,476 | D. S. Keener and G. J. Moore                                                                                              | Personal Computer System with Storage Controller Controlling Data Transfer                                                                                      |
| 5,287,482 | R. K. Arimilli, S. Dhawan, J. O. Nicholson, and D. W. Siegel                                                              | Input/Output Cache                                                                                                                                              |
| 5,287,491 | Y. Hsu                                                                                                                    | Network Rearrangement Method and System                                                                                                                         |
| 5,287,493 | T. W. Jacopi                                                                                                              | Database Interactive Prompted Query System Having Named Database Tables Linked Together by a User Through Join Statements                                       |
| 5,287,494 | L. C. Garcia, D. B. Lindquist, and G. F. Rollo                                                                            | Sorting/Merging Tree for Determining a Next Tournament Champion in Each Cycle by Simultaneously Comparing Records in a Path of the Previous Tournament Champion |

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| 5,287,496 | M.-S. Chen, K.-L. Wu, and P. S. Yu                                                                                                                         | Dynamic, Finite Versioning for Concurrent Transaction and Query Processing                                                                                                                             |
| 5,287,505 | N. Calvert, J. J. Eakins, E. W. Emerick, D. L. Johnston, J. L. Koehler, G. P. Miller, J. R. Morcomb, B. T. Sinclair, G. B. Scarborough, and S. D. Westling | On-line Problem Management of Remote Data Processing Systems, Using Local Problem Determination Procedures and a Centralized Database                                                                  |
| 5,287,510 | C. B. Hall, P. W. Markstein, and J. K. O'Brien                                                                                                             | Method for Improving the Efficiency of Arithmetic Code Generation in an Optimizing Compiler Using Machine Independent Update Instruction Generation                                                    |
| 5,287,519 | R. A. Dayan, K. D. Le, M. T. Mittelstedt, P. E. Newman, D. L. Randall, L. A. Ruotolo, and J. B. Yoder                                                      | LAN Station Personal Computer System with Controlled Data Access for Normal and Unauthorized Users and Method                                                                                          |
| 5,287,527 | G. S. Delp and B. A. Schuelke                                                                                                                              | Logical Signal Output Drivers for Integrated Circuit Interconnection                                                                                                                                   |
| 5,288,007 | M. J. Interrante, M. Berger, E. F. Handford, and E. Tas                                                                                                    | Apparatus and Methods for Making Simultaneous Electrical Connections                                                                                                                                   |
| 5,288,241 | R. V. Davidge, J. R. Dewitt, P. J. Galinis, F. A. Kuchar, Jr., J. H. Neer, and T. H. Newson                                                                | Cable Locking Covers                                                                                                                                                                                   |
| 5,288,367 | D. Angell and C. J. Radens                                                                                                                                 | End-point Detection                                                                                                                                                                                    |
| 5,288,456 | M. O. Aboelfotoh, M. J. Brady, and L. Krusin-Elbaum                                                                                                        | Compound with Room Temperature Electrical Resistivity Comparable to That of Elemental Copper                                                                                                           |
| 5,288,539 | K. Araki                                                                                                                                                   | Tab Tape with a Peeling-Prevention Structure for the Conductive Layer                                                                                                                                  |
| 5,288,541 | K. J. Blackwell, P. C. Chen, S. E. Deliman, A. R. Knoll, G. J. Matarese, and R. D. Weale                                                                   | Method for Metallizing Through Holes in Thin Film Substrates, and Resulting Devices                                                                                                                    |
| 5,288,542 | M. J. Cibulsky, K. I. Papathomas, W. J. Summa, D. W. Wang, and P. R. Zippetelli                                                                            | Composite for Providing a Rigid-Flexible Circuit Board Construction and Method for Fabrication Thereof                                                                                                 |
| 5,288,569 | B. J. Lin                                                                                                                                                  | Feature Biasing and Absorptive Phase-Shifting Techniques to Improve Optical Projection Imaging                                                                                                         |
| 5,288,842 | C. Feger, R. T. Hodgson, D. A. Lewis, and R. Saraf                                                                                                         | Morphological Composite Materials Formed from Different Precursors                                                                                                                                     |
| 5,288,944 | L. A. Bronson, S. P. Moore, and J. A. Shriver III                                                                                                          | Pinned Ceramic Chip Carrier                                                                                                                                                                            |
| 5,288,991 | M. R. King and W. H. Vonderhaar                                                                                                                            | Optical System for Rapid Inspection of Via Location                                                                                                                                                    |
| 5,289,097 | K. J. Erickson, R. Greenberg, and D. W. Nelson                                                                                                             | Spindle Control Method and Apparatus for Disk Drive                                                                                                                                                    |
| 5,289,205 | R. J. Torres                                                                                                                                               | Method and Apparatus of Enhancing Presentation of Data for Selection as Inputs to a Process in a Data Processing System                                                                                |
| 5,289,319 | E. E. Aviles, E. R. Childers, A. A. Fennema, and D. P. McReynolds                                                                                          | Apparatus and Method for Detecting Physical Orientation of a Position System and for Calibrating an Optimum Control for the System That is Usable in Optical Disk Recorders                            |
| 5,289,432 | S. H. Dhong and H. J. Shin                                                                                                                                 | Dual-Port Static Random Access Memory Cell                                                                                                                                                             |
| 5,289,445 | F. S. Luecke                                                                                                                                               | Suspension System for Focus Actuator of an Optical Disk Drive                                                                                                                                          |
| 5,289,460 | J. E. Drake, Jr. and E. A. Hervatic                                                                                                                        | Maintenance of Message Distribution Trees in a Communications Network                                                                                                                                  |
| 5,289,461 | R. H. J. de Nijs                                                                                                                                           | Interconnection Method for Digital Multimedia Communications                                                                                                                                           |
| 5,289,462 | H. Ahmadi, R. Guerin, and L. Gun                                                                                                                           | Traffic Management in Packet Communications Networks                                                                                                                                                   |
| 5,289,470 | S.-P. Chang and A. N. Tantawy                                                                                                                              | Flexible Scheme for Buffer Space Allocation in Networking Devices                                                                                                                                      |
| 5,289,477 | J. E. Lenta and M. E. Medford                                                                                                                              | Personal Computer Wherein ECC and Parity Error Checking Can Be Selectively Chosen for Memory Elements Installed in the System, Memory Elements Enabling Selective Choice of Error Checking, and Method |
| 5,289,546 | D. J. Hetherington                                                                                                                                         | Apparatus and Method for Smooth Audio Scaling                                                                                                                                                          |
| 5,289,576 | D. G. Gibbons, J. A. Harstad, and D. C. Tannenbaum                                                                                                         | Attribute Filter for Computer Graphics Applications                                                                                                                                                    |
| 5,289,577 | C. A. Gonzales, T. A. Horvath, N. H. Kreitzer, A. G. Lean, and T. McCarthy                                                                                 | Process-Pipeline Architecture for Image/Video Processing                                                                                                                                               |
| 5,289,589 | R. L. Bingham and K. E. Dimitri                                                                                                                            | Automated Storage Library Having Redundant SCSI Bus System                                                                                                                                             |
| 5,289,632 | P. A. Chalco, M. F. Cali, L. Economikos, and J. L. Speidell                                                                                                | Applying Conductive Lines to Integrated Circuits                                                                                                                                                       |
| 5,289,639 | S. L. Bard, J. D. Jones, R. H. Katyl, R. J. Moore, and O. A. Moreno                                                                                        | Fluid Treatment Apparatus and Method                                                                                                                                                                   |
| 5,290,358 | G. W. Rubloff and J. J. Hsieh                                                                                                                              | Apparatus for Directional Low Pressure Chemical Vapor Deposition (DLPCVD)                                                                                                                              |
| 5,290,586 | L. P. M. Bushnell, J. A. Coffin, and G. Prada-Silva                                                                                                        | Method to Monitor Meta-Paete Cure on Metallized Substrates                                                                                                                                             |

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| 5,290,710 | J. Haj-Ali-Ahmadi, J. A. Frankeny, R. F. Frankeny, A. B. Habich, K. Hermann, and R. E. Hunt                     | Method for Testing Integrated Circuits on a Carrier Substrate                                                                                           |
| 5,290,986 | J. L. Colon, L. A. Horchos, and G. P. Suback                                                                    | Thermally Assisted Shorts Removal Process for Glass Ceramic Product Using an rf Field                                                                   |
| 5,290,992 | H. T. Lin and M. V. Pierson                                                                                     | Apparatus for Maximizing Light Beam Utilization                                                                                                         |
| 5,291,028 | D. A. Droge, R. Fischer, and M. Spieth                                                                          | Optical Device for Sensing Marks on a Surface Using Green Light Impinging at Least Sixty-five Degrees to the Normal                                     |
| 5,291,069 | G. F. Gooding and L. L. Tretter                                                                                 | Bipolar H Write Driver                                                                                                                                  |
| 5,291,112 | J. P. Karidis, G. McVicker, and J. P. Pawletko                                                                  | Positioning Apparatus and Movement Sensor                                                                                                               |
| 5,291,275 | L. Lumelsky                                                                                                     | Triple Field Buffer for Television Image Storage and Visualization on Raster Graphics Display                                                           |
| 5,291,371 | P. A. Gruber and A. R. Zingher                                                                                  | Thermal Joint                                                                                                                                           |
| 5,291,439 | B. A. Kauffmann, C. H. Lam, and J. B. Lasky                                                                     | Semiconductor Memory Cell and Memory Array with Inversion Layer                                                                                         |
| 5,291,442 | P. G. Emma, J. W. Knight, K. P. McAuliffe, J. H. Pomerene, R. N. Rechtschaffen, and F. J. Sparacio              | Method and Apparatus for Dynamic Cache Line Sectoring in Multiprocessor Systems                                                                         |
| 5,291,468 | D. E. Carmon and W. G. Crouse                                                                                   | Method and Apparatus for Synchronizing the Readout of a Sequential Media Device with a Separate Clocked Device                                          |
| 5,291,500 | A. M. Patel and R. A. Rutledge                                                                                  | Eight-Sample Look-Ahead for Coded Signal Processing Channels                                                                                            |
| 5,291,514 | W. Heitmann and D. Waters                                                                                       | Heater Autotone Control Apparatus and Method                                                                                                            |
| 5,291,586 | A. K. Jen, P. A. Gage, and A. Y. Ngai                                                                           | Hardware Implementation of Complex Data Transfer Instructions                                                                                           |
| 5,291,593 | R. L. Abraham, C. A. Ross, R. E. Moore, W. L. Rich, F. W. Shackelford, J. R. Tiller, Jr., and R. S. Briggs, Jr. | System for Persistent and Delayed Allocation Object Reference in an Object Oriented Environment                                                         |
| 5,291,599 | E. I. Cohen and M. R. Sheets                                                                                    | Dispatcher Switch for a Partitioner                                                                                                                     |
| 5,291,608 | G. A. Flurry                                                                                                    | Display Adapter Event Handler with Rendering Context Manager                                                                                            |
| 5,291,614 | R. G. Baker, B. J. DeBauche, C. Dombrowski, E. Jensen, L. H. Massman, M. McCain, and P. R. Swingle              | Real-time, Concurrent, Multifunction Digital Signal Processor Subsystem for Personal Computers                                                          |
| 5,291,923 | G. M. Gallagher and G. E. Johnson                                                                               | Door Opening System and Method                                                                                                                          |
| 5,292,477 | D. A. Chance, D. B. Goland, S. S. N. Reddy, S. L. Shinde, and D. R. Wall                                        | Supersaturation Method for Producing Metal Powder with a Uniform Distribution of Dispersants Method of Uses Thereof and Structures Fabricated Therewith |
| 5,292,678 | S. H. Dhong and W. Hwang                                                                                        | Forming a Bit Line Configuration for Semiconductor Memory                                                                                               |
| 5,292,688 | R. Hsiao, J. M. McCreary, V. R. Markovich, and D. P. Seraphim                                                   | Solder Interconnection Structure on Organic Substrates and Process for Making                                                                           |
| 5,292,689 | J. E. Cronin and H. S. Landis                                                                                   | Method for Planarizing Semiconductor Structure Using Subminimum Features                                                                                |
| 5,292,861 | K. I. Papathomas                                                                                                | Trifunctional Cyanate Esters, Polymers Thereof; Use and Preparation Thereof                                                                             |
| 5,293,083 | H. O. Askin, D. T. Hui, B. Salimi, and C. B. Winn                                                               | Fast Limited Swing Push-Pull Driver                                                                                                                     |
| 5,293,258 | A. J. Dattilo                                                                                                   | Automatic Correction for Color Printing                                                                                                                 |
| 5,293,298 | H. R. Foglia                                                                                                    | Electrical Connector                                                                                                                                    |
| 5,293,369 | C. M. Melas and P. Sutardja                                                                                     | Asynchronous Sampling Digital Detector System for Magnetic and Optical Recording Channels                                                               |
| 5,293,405 | J. E. Gersbach, C. R. Hoffman, and I. I. Novof                                                                  | Adaptive Equalization and Regeneration System                                                                                                           |
| 5,293,451 | P. F. Brown, S. V. De Gennaro, P. V. Desouza, and M. E. Epstein                                                 | Method and Apparatus for Generating Models of Spoken Words Based on a Small Number of Utterances                                                        |
| 5,293,470 | G. J. Birch, S. J. Cook, A. S. Murphy, P. Tustin, and J. A. Woolsey                                             | Data Processing System for Defining and Processing Objects in Response to System User Operations                                                        |
| 5,293,472 | J. B. Lotspiech                                                                                                 | Method of Generating Lines and Curves of User Specified Thicknesses on a Raster Device                                                                  |
| 5,293,473 | E. M. Hesse and K. E. McGill                                                                                    | System and Method for Editing a Structured Document to Modify Emphasis Characteristics, Including Emphasis Menu Feature                                 |
| 5,293,491 | W. L. Leung, R. A. Kelley, and L. F. McDermott                                                                  | Data Processing System and Memory Controller for Lock Semaphore Operations                                                                              |
| 5,293,493 | B. A. Smith and L. T. Tran                                                                                      | Preemption Control for Central Processor with Cache                                                                                                     |
| 5,293,504 | J. U. Knickerbocker, C. H. Perry, and D. R. Wall                                                                | Multilayer Ceramic Substrate with Capped Vias                                                                                                           |
| 5,293,516 | J.-C. Fouere, K.-M. Kim, and P. Smetana                                                                         | Multiprobe Apparatus                                                                                                                                    |
| 5,293,565 | G. A. Jaquette, J. E. Kulakowski, J. A. McDowell, and R. J. Means                                               | Format for Data-Storing Disk Media Wherein Addressable Track Angular Length is Independent of Disk Revolutions                                          |

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| 5,293,584 | P. F. Brown, S. A. Della Pietra, V. J. Della Pietra, F. Jelinek, and R. L. Mercer                                    | Speech Recognition System for Natural Language Translation                                                                               |
| 5,293,590 | D. S. Keener and R. W. Voorhees                                                                                      | Personal Computer with Interface Controller                                                                                              |
| 5,293,600 | J. J. Vriezen                                                                                                        | Counter and Flux Bit Locking for Very Fast Shared Serialization of Shared Data Objects                                                   |
| 5,293,609 | F.-H. W. Shih, J. F. Macon, Jr., and S. Ong                                                                          | Hit-Density-Based Replacement for Data Cache with Prefetching                                                                            |
| 5,293,613 | C. O. Hayden, R. J. Hurban, and S. B. Stillman                                                                       | Recovery Control Register                                                                                                                |
| 5,293,622 | J. O. Nicholson, J. C. O'Quin III, J. T. O'Quin II, and F. E. Strietelmeier                                          | Computer System with Input/Output Cache                                                                                                  |
| 5,294,072 | D. G. East, S. L. Felde, and G. S. Robles                                                                            | Tape Cartridge Door with Pseudo-Head for Maintaining Tape Tension                                                                        |
| 5,294,257 | H. L. Kelly, H.-G. H. Kolan, J. M. Leas, and T. Nakasogi                                                             | Edge Masking Spin Tool                                                                                                                   |
| 5,294,259 | M. J. Canestaro, D. G. McBride, L. J. Konrad III, and R. J. Moore                                                    | Fluid Treatment Device                                                                                                                   |
| 5,294,287 | L. L. Chang, L. Esaki, H. Munekata, H. Ohno, and S. von Molnar                                                       | Class of Magnetic Materials for Solid State Devices                                                                                      |
| 5,294,289 | T. F. Heinz, G. S. Selwyn, S. Singh, and J. A. Spinetti, Jr.                                                         | Detection of Interfaces with Atomic Resolution During Material Processing by Optical Second Harmonic Generation                          |
| 5,294,486 | M. Paunovic and K.-N. Tu                                                                                             | Barrier Improvement in Thin Films                                                                                                        |
| 5,294,518 | M. J. Brady, B. E. Braren, R. J. Gambino, A. Grill, and V. V. Patel                                                  | Amorphous Write-Read Optical Storage Memory                                                                                              |
| 5,294,520 | T. A. DeMercurio, R. J. Hetherington, R. A. Meyen, and S. A. Sands                                                   | Zero Undercut Etch Process                                                                                                               |
| 5,294,558 | S. Subbanna                                                                                                          | Method of Making Double-Self-Aligned Bipolar Transistor Structure                                                                        |
| 5,294,570 | M. J. Fleming, Jr., W. A. Syverson, and E. J. White                                                                  | Reduction of Foreign Particulate Matter on Semiconductor Wafers                                                                          |
| 5,294,680 | C. J. Knors, E. H. Macy, and M. Moreau                                                                               | Polymeric Dyes for Antireflective Coatings                                                                                               |
| 5,294,772 | M. E. Brown, W. T. Grant, N. A. Rizk, N. S. Sandhu, and Y.-W. Yau                                                    | Debris Control System                                                                                                                    |
| 5,294,800 | V. M. Chung, G. J. Dick, A. S. Ganong, and E. J. Stashluk, Jr.                                                       | E-Beam Control Data Compaction System and Method                                                                                         |
| 5,294,806 | J. S. Batchelder, D. M. DeCain, and P. C. D. Hobbs                                                                   | Optical Submicron Aerosol Particle Detector                                                                                              |
| 5,295,067 | H. H. Cho and D. L. Collet                                                                                           | Order Planning System Which Transforms Existing Engineering Relationships into an Order Planning Knowledge Base                          |
| 5,295,069 | I. L. Hersey, R. L. Stephens, and A. Zamora                                                                          | Computer Method for Ranked Hyphenation of Multilingual Text                                                                              |
| 5,295,081 | R. R. Habra                                                                                                          | Concurrent Interactive Wire Editing                                                                                                      |
| 5,295,128 | R. A. Hutchins, C. M. Melas, and P. Sutardja                                                                         | Clock Controller Employing a Discrete Time Control Loop Method for Clocking Data in an Asynchronous Channel                              |
| 5,295,155 | J. E. Gersbach, I. I. Novof, and J. K. Lee                                                                           | Multi-level Digital Data Regeneration System                                                                                             |
| 5,295,161 | D. M. Dreps and R. P. Rizzo                                                                                          | Fiber Optic Amplifier with Active Elements Feedback Circuit                                                                              |
| 5,295,214 | D. F. Card, E. S. Dittman, and M. K. Saraiya                                                                         | Optical Module with Tolerant Wave Soldered Joints                                                                                        |
| 5,295,241 | S. T. Eagen, H. G. Kiel, N. A. Martel, Jr., W. C. Rapp, and S. M. Shao                                               | Method and Apparatus for Local Function Key Control of Scrolling on Certain Computer Workstations                                        |
| 5,295,246 | G. Bischoff, P. J. Milot, M. Segre, J. S. Spencer, and L. R. Wilson                                                  | Bidirectional FIFO Buffer for Interfacing Between Two Buses of a Multitasking System                                                     |
| 5,295,249 | B. Blaner and S. Vassiliadis                                                                                         | Compounding Preprocessor for Cache for Identifying Multiple Instructions Which May Be Executed in Parallel                               |
| 5,295,262 | J. W. Seigh II                                                                                                       | Read-Only Access without Blocking Via Access Vectors                                                                                     |
| 5,295,522 | R. L. DeAngelis and G. M. Gallagher                                                                                  | Gas Purge System for Isolation Enclosure for Contamination Sensitive Items                                                               |
| 5,296,048 | L. L. Chang, L. Esaki, H. Munekata, H. Ohno, and S. von Molnar                                                       | Class of Magnetic Materials for Solid State Devices                                                                                      |
| 5,296,091 | J. Bartha, T. Bayer, J. Greschner, D. Kern, V. Mattern, and R. Stoehr                                                | Method of Etching Substrates Having a Low Thermal Conductivity                                                                           |
| 5,296,189 | S. K. Kang, S. Purushothaman, J. J. Ritsko, J. M. Shaw, and S. L. Shinde                                             | Method for Producing Metal Powder with a Uniform Distribution of Dispersants, Method of Uses Thereof and Structures Fabricated Therewith |
| 5,296,332 | H. S. Sachdev, W. E. Conley, P. Jagannathan, A. D. Katnani, R. W. Kwong, L. L. Linehan, S. S. Muira, and R. J. Smith | Crosslinkable Aqueous Developable Photoresist Compositions and Method for Use Thereof                                                    |
| 5,296,458 | F. J. Himpsel                                                                                                        | Epitaxy of High $T_c$ Superconducting Films on (001) Silicon Surface                                                                     |

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| 5,296,775 | J. E. Cronin, R. A. Previti-Kelly, J. G. Ryan, and T. D. Sullivan                                                    | Cooling Microfan Arrangements and Process                                                                                                                  |
| 5,296,828 | P. Feinstein, Jr., R. N. Price, V. E. Whitehead, and J. A. Williamson                                                | Coil for Magnetic Repulsion Punch                                                                                                                          |
| 5,296,916 | H. L. Kelly, H. Kolan, and D. Perlman                                                                                | Mask Alignment System for Components with Extremely Sensitive Surfaces                                                                                     |
| 5,296,936 | J. L. Pittas, S. M. Choi, L. Lumelsky, and A. W. Peevers                                                             | Communication Apparatus and Method for Transferring Image Data from a Source to One or More Receivers                                                      |
| 5,296,975 | J. T. Contreras, S. A. Jove, K. B. Klaassen, and J. C. L. van Peppen                                                 | High-Transition-Rate, Low-Supply-Voltage Write Driver Circuitry for Magnetic Inductive Write Head                                                          |
| 5,296,980 | T. Matsui and Y. Sonobe                                                                                              | Magnetic Disk Apparatus Having Recording Heads for Opposite Disk Surfaces Which are Offset from Each Other                                                 |
| 5,296,993 | J. A. Aboaf, E. V. Denison, V. N. Kahwaty, and G. Steving                                                            | Magnetic Head with Magnetic Substrate and an Enhanced Poletip Thereon                                                                                      |
| 5,297,003 | H. Nomura and Y. Uchiyama                                                                                            | Computer, Keyboard Apparatus, and Keyboard Tilting Mechanism                                                                                               |
| 5,297,076 | C. M. Jefferson and A. J. Meixner                                                                                    | Spectral Hole Burning Data Storage System and Method                                                                                                       |
| 5,297,089 | R. C. Wong                                                                                                           | Balanced Bit Line Pull Up Circuitry for Random Access Memories                                                                                             |
| 5,297,091 | R. M. Blake, W. P. Hovis, and D. J. Perlman                                                                          | Early Row Address Strobe (RAS) Precharge                                                                                                                   |
| 5,297,137 | Y. Ofek and M. M. Yung                                                                                               | Process for Routing Data Packets Around a Multi-node Communications Network                                                                                |
| 5,297,151 | M. Gruetzner, L. M. Huisman, S. Kundu, and C. W. Starke                                                              | Adjustable Weighted Random Test Pattern Generator for Logic Circuits                                                                                       |
| 5,297,244 | G. P. Pomichter, Jr.                                                                                                 | Method and System for Double Error Antialiasing in a Computer Display System                                                                               |
| 5,297,248 | A. L. Clark                                                                                                          | Multi-color Animation of Computer Program Execution                                                                                                        |
| 5,297,274 | J. W. Jackson                                                                                                        | Performance Analysis of Program in Multithread OS by Creating Concurrently Running Thread Generating Breakpoint Interrupts to Active Tracing Monitor       |
| 5,297,275 | P. Thayer                                                                                                            | Personal Computer System Variable Resolution Timers                                                                                                        |
| 5,297,277 | D. A. Dein, H. C. Holland, R. J. Kammerer, and R. G. Valdez                                                          | Apparatus for Monitoring Data Transfers of an OEMI Channel Interface                                                                                       |
| 5,297,278 | D. S. Wang and M. L. Williams                                                                                        | System for Authorized Conditional Deletion of Data Objects within a Library Service                                                                        |
| 5,297,281 | P. G. Emma, J. W. Knight, J. H. Pomerene, R. N. Rechtschaffen, and F. J. Sparacio                                    | Multiple Sequence Processor System                                                                                                                         |
| 5,297,618 | J. R. Behun and J. A. Benenati                                                                                       | Apparatus for Removing a Heatsink from an Electronic Module or Package                                                                                     |
| 5,297,754 | T. A. Albrecht, A. J. Argumedo, J. H. Eaton, D. G. East, S. L. Felde, and D. W. Johnson                              | Tape Reel with Brake and Dust Shield                                                                                                                       |
| 5,297,755 | S. L. Felde, P. Y. Hu, G. F. Hudson, D. W. Johnson, K. J. Lusk, G. S. Robles, and R. R. Sidebotham                   | Tape Cartridge Tape Path                                                                                                                                   |
| 5,297,967 | J. G. Baumberger, F. P. Donlan, Jr., and J. R. Petrozello                                                            | Electrical Interconnector with Helical Containing Portion and Assembly Using Same                                                                          |
| 5,298,324 | P. R. Ivett, K. E. Johnson, and R. E. Nelson                                                                         | Magnetic Recording Medium Having a Cobalt-Platinum-Chromium Alloy Magnetic Layer and a Chromium-Tungsten Underlayer a Specified Underlayer Thickness Range |
| 5,298,452 | B. S. Meyerson                                                                                                       | Method and Apparatus for Low Temperature, Low Pressure Chemical Vapor Deposition of Epitaxial Silicon Layers                                               |
| 5,298,685 | P. S. Bindra, R. D. Havens, V. R. Markovich, and J. A. Molla                                                         | Interconnection Method and Structure for Organic Circuit Boards                                                                                            |
| 5,298,715 | P. A. Chalco, W. L. Hillman, R. H. Kurth, and N. T. Panousis                                                         | Lasersonic Soldering of Fine Insulated Wires to Heat-Sensitive Substrates                                                                                  |
| 5,298,720 | J. J. Cuomo, M. V. Grazioso, C. R. Guarnieri, K. L. Haller, J. E. Heidenreich III, G. S. Selwyn, and S. J. Whitehair | Method and Apparatus for Contamination Control in Processing Apparatus Containing Voltage Driven Electrode                                                 |
| 5,298,731 | A. H. Ett                                                                                                            | Method for Printing and Reading for Orthogonal Bar Code Patterns                                                                                           |
| 5,298,786 | G. G. Shahidi, D. D. Tang, and Y. Taur                                                                               | SOI Lateral Bipolar Transistor with Edge-Strapped Base Contact and Method of Fabricating Same                                                              |
| 5,298,790 | D. L. Harmon, M. L. Kerbaugh, N. T. Pascoe, and J. F. Rembetski                                                      | Reactive Ion Etching Buffer Mask                                                                                                                           |
| 5,298,799 | D. B. Cochran and K. M. Owczarski                                                                                    | Single-Shot Circuit with Fast Reset                                                                                                                        |
| 5,298,875 | R. B. Laibowitz and G. J. Lasher                                                                                     | Controllable Levitation Device                                                                                                                             |
| 5,298,897 | C. Harrison, M. D. Marik, and R. L. Posthumus                                                                        | Method and Apparatus for Decoding Two Frequency (F/SF) Data Signals                                                                                        |



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| 5,298,975 | H. A. Khoury, C. K. Chi, J. G. Clabes, P. C. D. Hobbs, L. Landstein, M. P. O'Boyle, H. K. Wickramasinghe, and S. K. Wolterman | Combined Scanning Force Microscope and Optical Metrology Tool                                                               |
| 5,298,992 | M. A. Pietras, A. A. Rodriguez, and A. J. Saenz                                                                               | System and Method for Frame-Differencing Based Video Compression/Decompression with Forward and Reverse Playback Capability |
| 5,298,993 | A. D. Edgar and J. M. Kasson                                                                                                  | Display Calibration                                                                                                         |
| 5,299,087 | Y. Fermier, M. Ferry, C. Jacquart, and P. Vachee                                                                              | Overload Protection Circuit                                                                                                 |
| 5,299,122 | D. S. Wang and C. M. N. Cree                                                                                                  | Table Manipulations for Enterprise Specific Search Terms                                                                    |
| 5,299,123 | D. S.-F. Wang and C. M. N. Cree                                                                                               | Method for Allowing Retrieval of Documents with User Defined Search Descriptors                                             |
| 5,299,136 | J. Babakanian, J. W. Davis, M. S. Garvin, R. M. Swanson, N. G. Thoma, and D. M. Wu                                            | Fully Testable DCVS Circuits with Single-Track Global Wiring                                                                |
| 5,299,190 | R. O. LaMaire and D. N. Serpanos                                                                                              | Two-Dimensional Round-Robin Scheduling Mechanism for Switches with Multiple Input Queues                                    |
| 5,299,196 | J. J. Allen, Jr.                                                                                                              | Distributed Address Decoding for Bus Structures                                                                             |
| 5,299,201 | A. Carusone, Jr., A. W. Garrigan, W. Hunsinger, G. T. Moffitt, J. M. Taylor, and N. N. Tendolkar                              | Method and Apparatus for Isolating Faults in a Network Having Serially Connected Links                                      |
| 5,299,208 | M. M. Blaum and H. C. Van Tilborg                                                                                             | Enhanced Decoding of Interleaved Error Correcting Codes                                                                     |
| 5,299,288 | E. Glassman, W. A. Hanson, P. Kazanides, B. D. Mittelstadt, B. L. Musits, H. A. Paul, and R. H. Taylor                        | Image-Directed Robotic System for Precise Robotic Surgery Including Redundant Consistency Checking                          |
| 5,299,297 | D. C. Reynolds and M. Wong                                                                                                    | Method for Enhancing Three-Dimensional Interference Checking                                                                |
| 5,299,315 | A. L. Chin, S. J. Eleazar-Garcia, T. V. Lee, D. S. Keener, G. J. Moore, and E. S. Stine                                       | Personal Computer with Programmable Threshold FIFO Registers for Data Transfer                                              |
| 5,299,319 | S. Vassiliadis and J. E. Phillips                                                                                             | High Performance Interlock Collapsing Scism ALU Apparatus                                                                   |
| 5,299,393 | W. F. Chandler, L. B. Jacobson, R. D. Johnson, and S. E. Monahan                                                              | Slurry Containment Device for Polishing Semiconductor Wafers                                                                |
| 5,299,756 | P. Y. Hu and J. L. Overacker                                                                                                  | Foil Wrapped Flexible Web Guide                                                                                             |
| 5,299,939 | G. F. Walker and A. Zingher                                                                                                   | Spring Array Connector                                                                                                      |
| 5,300,008 | H. C. Lee, L. T. Sehringer, and G. D. VanBurger                                                                               | Printer and Folder with Chains Having Light Weight Pendants Hanging Therefrom                                               |
| 5,300,208 | M. Angelopoulos, W.-S. Huang, J. M. Park, and J. R. White                                                                     | Fabrication of Printed Circuit Boards Using Conducting Polymer                                                              |
| 5,300,402 | N. A. Card, Jr., R. A. Day, D. H. Glatzel, and D. J. Russell                                                                  | Composition for Photo Imaging                                                                                               |
| 5,300,403 | M. Angelopolus, D. G. Berger, E. D. Perfecto, and P. J. Wilkens                                                               | Line Width Control in a Radiation Sensitive Polyimide                                                                       |
| 5,300,786 | T. A. Brunner, M. S. Hibbs, B. B. Peck, and C. A. Spence                                                                      | Optical Focus Phase Shift Test Pattern, Monitoring System and Process                                                       |
| 5,300,800 | G. B. Bronner, S. H. Dhong, and W. Hwang                                                                                      | Low Leakage Substrate Plate DRAM Cell                                                                                       |
| 5,300,813 | R. V. Joshi, J. J. Cuomo, H. M. Dalal, and L. L. Hsu                                                                          | Refractory Metal Capped Low Resistivity Metal Conductor Lines and Vias                                                      |
| 5,300,827 | M. S. Michail and J. L. Walsh                                                                                                 | Noise Immune NTL Logic Network                                                                                              |
| 5,300,911 | M. M. Walters                                                                                                                 | Monolithic Magnetic Device with Printed Circuit Interconnections                                                            |
| 5,300,949 | A. A. Rodriguez, M. A. Pietras, S. M. Hancock, R. F. Kantner, Jr., C. T. Rutherford, and L. R. Wilson                         | Scalable Digital Video Decompressor                                                                                         |
| 5,301,012 | M. R. King and W. B. Scism                                                                                                    | Optical Technique for Rapid Inspection of Via Underetch and Contamination                                                   |
| 5,301,038 | S. J. P. Todd                                                                                                                 | Image Processor and Method for Processing Pixel Data                                                                        |
| 5,301,079 | W. C. Cain, B. Dieny, R. E. Fontana, Jr., and V. S. Speriosu                                                                  | Current Biased Magnetoresistive Spin Valve Sensor                                                                           |
| 5,301,080 | H. H. Ottesen and G. J. Smith                                                                                                 | Bias Servo Loop for Magneto-resistive Read/Write Head                                                                       |
| 5,301,118 | H. L. Heck and J. S. Kresge                                                                                                   | Monte Carlo Simulation Design Methodology                                                                                   |
| 5,301,124 | K. T. Chan, D. E. Davis, W. A. Enichen, C. T. Ho, E. V. Weber, and G. Langner                                                 | Registration of Patterns Formed of Multiple Fields                                                                          |
| 5,301,165 | M. K. Ciraula, C. M. Durham, and D. L. Jallice                                                                                | Chip Select Speedup Circuit for a Memory                                                                                    |
| 5,301,196 | J. F. Ewen and A. X. Widmer                                                                                                   | Half-speed Clock Recovery and Demultiplexer Circuit                                                                         |
| 5,301,202 | C. S. Harder, S. V. Iyer, H. P. Meier, A. Phillips, Jr., and A. Behfar-Rad                                                    | Semiconductor Ridge Waveguide Laser with Asymmetrical Cladding                                                              |

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| 5,301,231 | D. G. Abraham, D. Henningsmeyer, J. M. Hudson, D. B. Johnson, A. V. Le, S. M. Matyas, and J. V. Stevens    | User Defined Function Facility                                                                                                                                                 |
| 5,301,242 | C. A. Gonzales and E. Viscito                                                                              | Apparatus and Method for Motion Video Encoding Employing an Adaptive Quantizer                                                                                                 |
| 5,301,265 | M. Itoh                                                                                                    | Apparatus for Converting N Picture Elements to M Picture Elements                                                                                                              |
| 5,301,278 | R. J. Bowater, S. P. Larky, J. C. St. Clair, and P. G. Sidoli                                              | Flexible Dynamic Memory Controller                                                                                                                                             |
| 5,301,282 | N. Amini, B. F. Boury, and T. J. Lohman                                                                    | Controlling Bus Allocation Using Arbitration Hold                                                                                                                              |
| 5,301,290 | W. H. Tetzlaff and J. H. Unger                                                                             | Method for Minimizing Lock Processing While Ensuring Consistency Among Pages Common to Local Processor Caches and a Shared External Store                                      |
| 5,301,297 | J. M. Menon and L. C. Wood, Jr.                                                                            | Method and Means for Managing RAID 5 DASD Arrays Having RAID DASD Arrays as Logical Devices Thereof                                                                            |
| 5,301,302 | J. W. Blackard, R. G. Fogg, Jr., and A. M. de Nicolas                                                      | Memory Mapping and Special Write Detection in a System and Method for Simulating a CPU Processor                                                                               |
| 5,301,304 | M. J. Menon                                                                                                | Emulating Records in One Record Format in Another Record Format                                                                                                                |
| 5,301,312 | K. W. Christopher, Jr., K. D. Huynh, V. M. Roarabaugh, and T. C. Waldron                                   | Method and System for Utilizing Benign Fault Occurrence to Measure Interrupt-Blocking Times                                                                                    |
| 5,301,317 | G. M. Lohman, K. Ono, and J. D. Palmer                                                                     | System for Adapting Query Optimization Effort to Expected Execution Time                                                                                                       |
| 5,301,321 | L. K. Bell, J. D. Jones, D. J. Kardell, T.-N. Nguyen, and K. A. Varga                                      | Method and System for the Minimization of Conflicting Activities with Respect to an Object Stored Within a Data Processing System                                              |
| 5,301,323 | T. R. Maeurer and A. S. Meritt                                                                             | Data Processing System Including Dynamic Channel Path Management                                                                                                               |
| 5,301,324 | P. H. Dewey, W. J. Glynn, R. E. Hough, and M. R. Rao                                                       | Method and Apparatus for Dynamic Work Reassignment Among Asymmetric, Coupled Processors                                                                                        |
| 5,301,340 | P. W. Cook                                                                                                 | IC Chips Including ALUs and Identical Register Files Whereby a Number of ALUs Directly and Concurrently Write Results to Every Register File Per Cycle                         |
| 5,301,341 | S. Vassiliadis and J. E. Phillips                                                                          | Overflow Determination for Three-Operand ALUs in a Scalable Compound Instruction Set Machine Which Compounds Two Arithmetic Instructions                                       |
| 5,301,343 | R. D. Alvarez                                                                                              | System Having Microprocessor Local Memory Expansion Capability Through Removable Coupling of Local Memory Expansion Boards Directly to the High Speed Microprocessor Local Bus |
| 5,301,348 | W. Jaaskelainen                                                                                            | Dynamic Progress Marking Icon                                                                                                                                                  |
| 5,301,618 | U. Abendschein and F. Schlegel                                                                             | Guide Means for Conveying Sheet-Shaped Media                                                                                                                                   |
| 5,302,266 | H. J. Grabarz, A. Grill, W. M. Holber, J. S. Logan, and J. T. C. Yeh                                       | Method and Apparatus for Filing High Aspect Patterns with Metal                                                                                                                |
| 5,302,420 | T. N. Nguyen, G. S. Oehrlein, and Z. A. Weinberg                                                           | Plasma Deposition of Fluorocarbon                                                                                                                                              |
| 5,302,434 | M. F. Doerner, D. S. Parker, A. W. Wu, and T. Yogi                                                         | Magnetic Recording Disk for Contact Recording                                                                                                                                  |
| 5,302,851 | M. Ree, W. Volksen, and D. Y. Yoon                                                                         | Circuit Assembly with Polyimide Insulator                                                                                                                                      |
| 5,302,950 | W. J. Johnson, L. M. Lachman, G. Vega, and M. L. Williams                                                  | Method of and Apparatus for Providing Automatic Determination of Information Sampling Rate                                                                                     |
| 5,303,096 | C. G. Keller                                                                                               | Merging of Heads into Disk Drives Using Low Melting Wax                                                                                                                        |
| 5,303,114 | M. Ferry and P. Zeraffa                                                                                    | Overload Protection Circuit Capable of Sustaining High Inrush Current in the Load Circuit                                                                                      |
| 5,303,141 | J. S. Batchelder, H. W. Curtis, D. S. Goodman, F. Gracer, R. R. Jackson, G. M. Koppelman, and J. D. Mackay | Model Generation System Having Closed-Loop Extrusion Nozzle Positioning                                                                                                        |
| 5,303,166 | E. A. Amalfitano and G. J. McKnight                                                                        | Method and System for Automated Network Benchmark Performance Analysis                                                                                                         |
| 5,303,170 | A. G. Valko                                                                                                | System and Method for Process Modelling and Project Planning                                                                                                                   |
| 5,303,176 | D. A. Hrusecky, J. E. Phillips, and S. Vassiliadis                                                         | High Performance Array Multiplier Using Four-to-Two Composite Counters                                                                                                         |
| 5,303,196 | H. D. Sang and E. J. Sprogis                                                                               | Open Bit Line Memory Devices and Operational Method                                                                                                                            |
| 5,303,214 | J. E. Kulakowski and R. J. Means                                                                           | Multi-media-Type Automatic Libraries                                                                                                                                           |
| 5,303,219 | J. E. Kulakowski and R. J. Means                                                                           | Reclamation of Dust Contaminated Sectors in Optical Disk Apparatus                                                                                                             |
| 5,303,237 | W. C. Bergman and J. R. Cherukuri                                                                          | Frame Relay System Capable of Handling both Voice and Data Frames                                                                                                              |
| 5,303,238 | J. L. Brodd, J. D. Eikenhorst, A. F. Fahmy, H. G. Kiel, and J. H. Maher                                    | Network Communications Intermediate Interface                                                                                                                                  |
| 5,303,311 | A. K. Epting and T. A. Will                                                                                | Method and Apparatus for Recognizing Characters                                                                                                                                |
| 5,303,312 | L. D. Comerford and S. E. Levy                                                                             | Handwriting Recognition by Character Template                                                                                                                                  |
| 5,303,340 | J. Gonzalez-Lopez, R. S. Horton, T. P. Lanzoni, and W. L. Luken, Jr.                                       | Concave Polygon Drawing Method and Processor for a Computer Graphics Display System                                                                                            |
| 5,303,351 | S. P. Jackowski and R. B. Jenkins                                                                          | Error Recovery in a Multiple 170 Channel Computer System                                                                                                                       |

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| 5,303,356 | S. Vassiliadis, B. Blaner, and T. L. Jeremiah                                                                                       | System for Issuing Instructions for Parallel Execution Subsequent to Branch into a Group of Member Instructions with Compoundability in Dictation Tag |
| 5,303,365 | K. J. Getzlaff, J. Hajdu, and G. Knauff                                                                                             | Clock Generation in a Multi-chip Computersystem                                                                                                       |
| 5,303,555 | G. M. Chrysler and D. T. Vader                                                                                                      | Electronics Package with Improved Thermal Management by Thermoacoustic Heat Pumping                                                                   |
| 5,303,824 | H. Kohn                                                                                                                             | Solder Preform Carrier and Use                                                                                                                        |
| 5,303,862 | A. Bross, J. J. Hedrick, R. D. Johnson, R. O. Lussow, J. R. Lyster, Jr., D. E. Myers, J. D. Peruffo, K. G. Sachdev, and T. J. Walsh | Single Step Electrical/Mechanical Connection Process for Connecting I/O Pins and Creating Multilayer Structures                                       |
| 5,304,278 | J. Bartha, T. Bayer, J. Greschner, D. Kern, V. Mattern, and R. Stoehr                                                               | Apparatus for Plasma or Reactive Ion Etching and Method of Etching Substrates Having a Low Thermal Conductivity                                       |
| 5,304,279 | D. K. Coultas and J. H. Keller                                                                                                      | Radio Frequency Induction/Multipole Plasma Processing Tool                                                                                            |
| 5,304,284 | R. Jagannathan, S. Purushothaman, and S. A. Sikorski                                                                                | Methods for Etching a Less Reactive Material in the Presence of a More Reactive Material                                                              |
| 5,304,441 | D. J. Samuels and R. J. Yerdon                                                                                                      | Method of Optimizing Exposure of Photoresist by Patterning as a Function of Thermal Modeling                                                          |
| 5,304,457 | R. A. Day, J. D. Gelorme, D. J. Russell, and S. J. Witt                                                                             | Composition for Photo Imaging                                                                                                                         |
| 5,304,517 | J. A. Casey, S. M. DeCarr, S. S. N. Reddy, S. L. Shinde, V. M. Sura, and R. R. Tumala                                               | Toughened Glass Ceramic Substrates for Semiconductor Devices Subjected to Oxidizing Atmospheres during Sintering                                      |
| 5,304,898 | R. Kataoka and M. Kobayashi                                                                                                         | High Voltage Generating Circuit                                                                                                                       |
| 5,304,969 | L. Jacobowitz and M. E. Ecker                                                                                                       | Apparatus and a Method for an Electrical Transmission-Line Interface                                                                                  |
| 5,305,138 | C. J. Freedenberg, F. A. Herring, and U. A. Ziemins                                                                                 | Superachromatic UV and Visible Focusing Objective Lens                                                                                                |
| 5,305,165 | B. Brezoczky and H. Seki                                                                                                            | Tribo-Attractive Contact Data Storage System                                                                                                          |
| 5,305,184 | R. Andresen, R. J. Bellar, S. J. Kim, and A. L. Murphy                                                                              | Method and Apparatus for Immersion Cooling of an Electronic Board                                                                                     |
| 5,305,186 | B. K. Appelt, I. Memis, R. A. Schumacher, and J. M. Lauffer                                                                         | Power Carrier with Selective Thermal Performance                                                                                                      |
| 5,305,248 | L. M. Ammann                                                                                                                        | Fast IEEE Double Precision Reciprocals and Square Roots                                                                                               |
| 5,305,277 | M. T. Derwin, B. M. Ozaki, and W. A. Wall                                                                                           | Data Processing Apparatus Having Address Decoder Supporting Wide Range of Operational Frequencies                                                     |
| 5,305,431 | M. P. Cyr, W. F. Lawless, and T. L. Staley II                                                                                       | Method and System for Rendering Polygons on a Raster Display                                                                                          |
| 5,305,434 | D. J. Ballard, C. J. Bracht, G. E. Fisher, M. E. Payne, and T. D. Spencer                                                           | System and Method for Executing Panel Actions from Procedures                                                                                         |
| 5,305,437 | N. K. Fritze and M. E. Medford                                                                                                      | Graphical System Descriptor Method and System                                                                                                         |
| 5,305,440 | S. P. Morgan and T. A. Smith                                                                                                        | File Extension by Clients in a Distributed Data Processing System                                                                                     |
| 5,305,448 | J. S. Insalaco and M. D. Swanson                                                                                                    | Shared Access Serialization Featuring Second Process Lock Steal and Subsequent Write Access Denial to First Process                                   |
| 5,305,451 | H. H. Chao, J. H. Chang, and F.-H. W. Shih                                                                                          | Single Phase Clock Distribution Circuit for Providing Clock Signals to Multiple Chip Integrated Circuit Systems                                       |
| 5,305,454 | S. E. Record, A. M. Shepherd, and S. S. Shultz                                                                                      | Notification of Event Handlers in Broadcast or Propagation Mode by Event Management Services in a Computer System                                     |
| 5,305,455 | B. D. L. Anschuetz, P. P. Giangarra, J. A. Grantz, M. S. Kogan, D. C. Oakes, and S. M. Zannoni                                      | Per Thread Exception Management for Multitasking Multithreaded Operating System                                                                       |
| 5,305,461 | B. A. Feigenbaum, M. A. Fiechtner, and D. M. Miclette                                                                               | Method of Transparently Interconnecting Message Passing Systems                                                                                       |
| 5,305,523 | A. Bross, J. G. Cempa, R. O. Lussow, J. A. McDonald, D. E. Myers, J. D. Peruffo, T. J. Walsh, and T. J. Walsh III                   | Method of Direct Transferring of Electrically Conductive Elements into a Substrate                                                                    |
| 5,306,659 | K. D. Beyer and A. S. Yapsir                                                                                                        | Reach-Through Isolation Etching Method for Silicon-on-Insulator Devices                                                                               |
| 5,306,698 | B. T. Ahn, R. B. Beyers, and W. Y. Lee                                                                                              | Methods for Producing $TL_2CA_2BA_2CU_3$ Oxide Superconductors                                                                                        |
| 5,306,741 | P. C. Chen, T. E. Kindl, P. G. Rickerl, M. J. Schadt, and J. G. Stephanie                                                           | Method of Laminating Polyimide to Thin Sheet Metal                                                                                                    |
| 5,306,866 | H. W. Gruber, H. G. Horbach, G. W. Kötze, T. Ludwig, and H. Schettler                                                               | Module for Electronic Package                                                                                                                         |
| 5,306,872 | M. R. Kordus, M. S. Schneider, and L. H. Wirtz                                                                                      | Structures for Electrically Conductive Decals Filled with Organic Insulator Material                                                                  |
| 5,306,902 | D. S. Goodman                                                                                                                       | Confocal Method and Apparatus for Focusing in Projection Lithography                                                                                  |

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| 5,306,959 | G. Knauft, B. Leppla,<br>D. Schmunkamp, and U. Weiss                                                           | Electrical Circuit for Generating Pulse Strings                                                                                              |
| 5,307,005 | S. J. Ahladas and K. R. Covi                                                                                   | Zero Current Switching Reverse Recovery Circuit                                                                                              |
| 5,307,086 | D. L. Griffin and P. J. Keane                                                                                  | Method of Implementing a Preview Window in an Object Oriented Programming System                                                             |
| 5,307,223 | M. F. Doerner, D. S. Parker, A. W. Wu, and T. Yogi                                                             | Magnetic Recording Disk File for Contact Recording                                                                                           |
| 5,307,261 | R. A. Maki, H. Mitchell, S. K. Mukherjee, B. N. Panuganti, and A. D. E. Stiles                                 | Method and System for Product Configuration Management in a Computer Based Manufacturing System                                              |
| 5,307,265 | L. A. Winans                                                                                                   | Computer Method and System for Communication in a Multi-lingual Network                                                                      |
| 5,307,342 | C. J. Georgiou and T. A. Larsen                                                                                | Heterogeneous Ports Switch                                                                                                                   |
| 5,307,347 | M. Duault, J. J. Lynch, and R. E. Snyder                                                                       | Method and Apparatus for Sharing a Telecommunications Channel Among Multiple Users                                                           |
| 5,307,354 | K. D. Cramer and F. H. Keller                                                                                  | Method and Apparatus for Remote Maintenance and Error Recovery in Distributed Data Processing Networks                                       |
| 5,307,356 | J. A. Fifield                                                                                                  | Interlocked On-Chip ECC System                                                                                                               |
| 5,307,406 | T. W. Gee, J. W. Sylvant, L. S. Shannon, Jr., A. M. Bentley, R. S. Nelson, R. A. Luechtefeld, and T. T. Nguyen | ISDN Power Source Detection Circuit                                                                                                          |
| 5,307,410 | C. H. Bennett                                                                                                  | Interferometric Quantum Cryptographic Key Distribution System                                                                                |
| 5,307,445 | M. Dalal and D. Gangopadhyay                                                                                   | Query Optimization by Type Lattices in Object-Oriented Logic Programs and Deductive Databases                                                |
| 5,307,466 | R. W. Chang                                                                                                    | Distributed Programmable Priority Arbitration                                                                                                |
| 5,307,482 | R. Bealkowski, R. M. Begun, and M. R. Turner                                                                   | Computer, Non-maskable Interrupt Trace Routine Override                                                                                      |
| 5,307,483 | D. L. Knipfer, L. A. McMahon, and C. B. Metzger                                                                | Synchronization Instruction for Multiple Processor Network                                                                                   |
| 5,307,485 | F. G. Bordonaro, G. A. Brent, R. J. Edwards, J. Goldman, D. B. Lindquist, K. A. Patel, and P. R. Williams, Jr. | Method and Apparatus for Merging Sorted Lists in a Multiprocessor Shared Memory System                                                       |
| 5,307,491 | D. T. Feriozi and B. Khatri                                                                                    | Layered SCSI Device Driver with Error Handling Circuit Providing Sense Data from Device Directly to the Driver on the Occurrence of an Error |
| 5,307,497 | B. A. Feigenbaum and R. P. Springhetti                                                                         | Disk Operating System Loadable from Read Only Memory Using Installable File System Interface                                                 |
| 5,307,498 | I. R. Eisen, S. W. Murphrey, and D. Zagorski                                                                   | Automated Method for Adding Hooks to Software                                                                                                |
| 5,308,248 | R. V. Davidge, T. A. McClurg, J. H. Neer, R. J. Nelson, D. C. Newell, R. J. Noschese, and R. P. Sidor          | High Density Interconnection System                                                                                                          |
| 5,308,258 | J. G. Hatsios                                                                                                  | Planar Modular Interconnect System                                                                                                           |
| 5,308,414 | J. A. O'Neill, M. L. Passow, and J. Singh                                                                      | Method and Apparatus for Optical Emission End Point Detection in Plasma Etching Processes                                                    |
| 5,308,438 | W. J. Cote, J. E. Cronin, W. R. Hill, and C. A. Hoffman                                                        | Endpoint Detection Apparatus and Method for Chemical/Mechanical Polishing                                                                    |
| 5,308,439 | J. E. Cronin, K. E. Morrett, M. D. Potter, and T. D. Sullivan                                                  | Laternal Field Emission Devices and Methods of Fabrication                                                                                   |
| 5,308,785 | J. H. Comfort, D. L. Haramé, and S. R. Stiffler                                                                | Isolation Technique for Silicon Germanium Devices                                                                                            |
| 5,308,794 | K.-N. Tu                                                                                                       | Aluminum-Germanium Alloys for VLSI Metallization                                                                                             |
| 5,308,801 | F. H. Cocks, N. J. Bolinger, and H. M. Hammarstrom                                                             | Process for the Increase in Critical Temperature of High T <sub>c</sub> Superconductors                                                      |
| 5,308,928 | A. J. Parla and H. F. Tepper                                                                                   | Soldering Interconnects for Selective Line Coupling                                                                                          |
| 5,309,037 | L. D. Curley and M. J. Mitchell, Jr.                                                                           | Power-on Reset Circuit with Arbitrary Output Prevention                                                                                      |
| 5,309,264 | S.-C. A. Lien and R. A. John                                                                                   | Liquid Crystal Displays Having Multi-domain Cells                                                                                            |
| 5,309,295 | J. A. Bailey and P. H. Francois                                                                                | Method and Apparatus for Biasing a Magneto-resistive Head                                                                                    |
| 5,309,298 | K. B. Klaasen and J. C. L. van Peppen                                                                          | Suppression of Magnetic Instability in Inductive Recording Heads                                                                             |
| 5,309,299 | J. F. Crossland, D. G. East, J. A. Koski, and J. E. Smith                                                      | Method and System for Position Error Signal Generation Using Auto Correlation                                                                |
| 5,309,301 | T. A. Gregory, J. A. Hagan, and C. G. Keller                                                                   | Servo Controlled Lubricant Thickness for Near Contact Magnetic Recording                                                                     |
| 5,309,318 | K. E. Beilstein, Jr., C. L. Bertin, G. A. Kelley, Jr., and C. P. Miller                                        | Thermally Enhanced Semiconductor Chip Package                                                                                                |
| 5,309,323 | D. J. Gray, I. Golledge, and S. R. Spake                                                                       | Removable Electrical Unit with Combined Grip and Release Mechanism Exposed by Partial Withdrawal                                             |
| 5,309,354 | G. J. Dick                                                                                                     | Electron Beam Exposure Method                                                                                                                |
| 5,309,358 | G. P. Andrews and C.-M. Wang                                                                                   | Method for Interchange Code Conversion of Multi-byte Character String Characters                                                             |

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| 5,309,420 | G. A. Jacquette and W. C. Williams                                                                                                           | Discriminator for Detecting Signal Presence on Optical Media                                                                                  |
| 5,309,426 | R. S. Crouse, J. J. Cazzolla, L. L. Chang, M. M. Hurtado, K. D. Nguyen, J. L. Rivero, J. J. Ruiz, and L. Salcedo                             | High Performance Cascadable Simplex Switch                                                                                                    |
| 5,309,433 | I. Cidon, D. W. Davenport, J. H. Derby, J. G. Dudley, I. S. Gopal, J. P. Janniello, M. A. Kaplan, F. R. Koperda, S. Kuttan, and K. H. Potter | Methods and Apparatus for Routing Packets in Packet Transmission Networks                                                                     |
| 5,309,448 | A. T. Bouloutas, S. B. Calo, and A. J. Finkel                                                                                                | Methods and Systems for Alarm Correlation and Fault Localization in Communication Networks                                                    |
| 5,309,454 | Y. Taira                                                                                                                                     | Apparatus for Wavelength Conversion of Laser Light                                                                                            |
| 5,309,461 | D. E. Call, G. A. Jaquette, and J. Lewkowicz                                                                                                 | Compensated Laser Drive Circuit                                                                                                               |
| 5,309,465 | A. Antreasyan, G. Costrini, and P. D. Hoh                                                                                                    | Ridge Waveguide Semiconductor Laser with Thin Active Region                                                                                   |
| 5,309,476 | J. T. Murray, G. Ungerboeck, and M. S. Ware                                                                                                  | Automode Signal Detection in Full Duplex Modems                                                                                               |
| 5,309,542 | D. H. Strope, L. P. Brehm, K. N. Kapur, and R. C. Seward                                                                                     | Fiber Optic Transmitter Modification for Improved Extinction Ratio                                                                            |
| 5,309,552 | R. S. Horton, R. C. Mitchell, and W. G. Temnycky                                                                                             | Programmable Multi-format Display Controller                                                                                                  |
| 5,309,555 | A. S. Akins, P. A. Lee, G. P. Seaburg, and G. W. Arbeitman                                                                                   | Realtime Communication of Hand Drawn Images in a Multiprogramming Window Environment                                                          |
| 5,309,566 | L. E. Larson                                                                                                                                 | System and Method for Character Translation                                                                                                   |
| 5,310,440 | A. R. Zingher                                                                                                                                | Convection Transfer System                                                                                                                    |
| 5,310,451 | M. J. Tejwani and S. S. Iyer                                                                                                                 | Method of Forming an Ultra-Uniform Silicon-on-Insulator Layer                                                                                 |
| 5,310,580 | E. J. O'Sullivan, T. R. O'Toole, J. M. Roldan, L. T. Romankiw, C. J. Sambucetti, and R. Saraf                                                | Electroless Metal Adhesion to Organic Dielectric Material with Phase Separated Morphology                                                     |
| 5,310,602 | J. Li, J. W. Mayer, E. G. Colgan, and J. P. Gambino                                                                                          | Self-aligned Process for Capping Copper Lines                                                                                                 |
| 5,310,625 | M. Angelopoulos, D. G. Berger, J. W. Labadie, E. D. Perfecto, M. I. Sanchez, S. A. Swanson, and W. Volksen                                   | Process for Forming Negative Tone Images of Polyimides Using Base Treatment of Crosslinked Polyamic Ester                                     |
| 5,310,706 | F. Litchenberg, J. Mannhart, and D. Schlom                                                                                                   | Method for Manufacturing High $T_c$ Superconducting Circuit Elements with Metallic Substrate                                                  |
| 5,310,863 | K. G. Sachdev                                                                                                                                | Polyimide Materials with Improved Physico-Chemical Properties                                                                                 |
| 5,310,967 | P. A. Chalco, M. F. Cali, L. Economikos, and J. L. Speidell                                                                                  | Applying Conductive Lines to Integrated Circuits                                                                                              |
| 5,311,066 | S. J. Malloy and K. J. Treubert                                                                                                              | Universal Phase Match Path Generator for Three-Phase Power                                                                                    |
| 5,311,287 | N. M. Amer                                                                                                                                   | Direct Access Storage with Head-Disc Dynamics Monitor                                                                                         |
| 5,311,294 | C. Cromer and R. I. Knox                                                                                                                     | Method and Apparatus for Setting the Color Balance of a Color Display Device                                                                  |
| 5,311,474 | N. Urban                                                                                                                                     | Random Access Optical Storage                                                                                                                 |
| 5,311,509 | M. Heddes and R. Luijten                                                                                                                     | Configurable Gigabits Switch Adapter                                                                                                          |
| 5,311,513 | H. Ahmadi, J. H. Derby, R. Guérin, L. Gün, G. A. Marin, M. Naghshineh, and K. Sohraby                                                        | Rate-Based Congestion Control in Packet Communications Networks                                                                               |
| 5,311,519 | K. J. Getzlaff, T. Pflueger, and H.-W. Tast                                                                                                  | Multiplexer                                                                                                                                   |
| 5,311,539 | A. Behfar-Rad, M. E. Jost, and C. S. Harder                                                                                                  | Roughened Sidewall Ridge for High Power Fundamental Mode Semiconductor Ridge Waveguide Laser Operation                                        |
| 5,311,577 | R. J. Madrid, S. K. Miller, and S. K. Gursahaney                                                                                             | Data Processing System, Method and Program for Constructing Host Access Tables for Integration of Telephony Data with Data Processing Systems |
| 5,311,597 | W. S. Rosenbaum                                                                                                                              | Deferred Optical Character Recognition Active Pigeon Hole Sorting of Mail Pieces                                                              |
| 5,311,660 | W. A. Alpaugh, A. C. Bhatt, M. J. Canestaro, R. J. Day, E. O. Fey, and J. E. Larrabee                                                        | Methyl Chloroform-Free Desmear Process in Additive Circuitization                                                                             |
| 5,312,224 | J. S. Batchelder, S. A. Hall, and R. R. Jackson                                                                                              | Conical Logarithmic Spiral Viscosity Pump                                                                                                     |
| 5,312,238 | A. Bross and T. J. Walsh                                                                                                                     | Apparatus for Extruding Materials That Exhibit Anisotropic Properties by Means of Reciprocating Die Surfaces                                  |
| 5,312,245 | J. P. Brannen, R. R. Hansotte, Jr., and D. K. Neff                                                                                           | Particulate Trap for Vertical Furnace                                                                                                         |
| 5,312,509 | R. J. B. Eschbach                                                                                                                            | Manufacturing System for Low Temperature Chemical Vapor Deposition of High Purity Metals                                                      |

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| 5,312,532 | P. Andricacos, M. Branger, R. M. Browne, J. O. Dukovic, B. W. B. Fu, R. W. Hitzfeld, M. Flotta, D. R. McKenna, L. T. Romankiw, and S. Sahami | Multi-compartment Electroplating System                                                                                                  |
| 5,312,717 | H. S. Sachdev, J. C. Forster, L. L. Linehan, S. A. MacDonald, K. P. L. Muller, W. E. Mlynko, and L. K. Somerville                            | Residue Free Vertical Pattern Transfer with Top Surface Imaging Resists                                                                  |
| 5,312,777 | J. E. Cronin, K. E. Morrett, M. D. Potter, and M. J. Rutten                                                                                  | Fabrication Methods for Bidirectional Field Emission Devices and Storage Structures                                                      |
| 5,312,887 | K. I. Papathomas                                                                                                                             | Dicyanate Prepolymers, Use and Preparation Thereof                                                                                       |
| 5,313,051 | D. J. Brigida, M. K. Brown, F. Fado, V. S. Moore, T. K. Pate, J. J. Tout, Jr., P. F. Camilleri, R. L. Donaldson, and M. N. Gray              | Paperless Parcel Tracking System                                                                                                         |
| 5,313,068 | A. Z. Meiri, D. Ramm, and U. Shvadron                                                                                                        | Partitioning Method for E-beam Lithography                                                                                               |
| 5,313,094 | K. D. Beyer, C.-M. Hsieh, L. L. Hsu, D. E. Kotecki, and T.-D. Yuan                                                                           | Thermal Dissipation of Integrated Circuits Using Diamond Paths                                                                           |
| 5,313,227 | Y. Aoki and K. Takayanagi                                                                                                                    | Graphic Display System Capable of Cutting Out Partial Images                                                                             |
| 5,313,352 | T. Chikazawa, A. Aoyagi, and A. Tobari                                                                                                       | Magnetic Disk Slider Having Piezo-Electric Vibration Elements                                                                            |
| 5,313,366 | G. J. Gaudenzi and P. Nihal                                                                                                                  | Direct Chip Attach Module (DCAM)                                                                                                         |
| 5,313,424 | R. D. Adams, H. A. Bonges III, J. W. Dawson, and E. L. Hedberg                                                                               | Module Level Electronic Redundancy                                                                                                       |
| 5,313,430 | J. R. Rawlins and C. G. Rivadeneira                                                                                                          | Power Down Circuit for Testing Memory Arrays                                                                                             |
| 5,313,475 | D. C. Cromer, G. J. Gaudenzi, P. C. King, K. G. Kramer, and T. J. Louie                                                                      | ECC Function with Self-Contained High Performance Partial Write or Read/Modify/Write and Parity Look-Ahead Interface Scheme              |
| 5,313,476 | W. E. Haberkorn, Jr. and H. E. Roman                                                                                                         | Clock Security Ring                                                                                                                      |
| 5,313,499 | R. L. Coburn                                                                                                                                 | Constant Gain Phase Lock-Loop                                                                                                            |
| 5,313,503 | T. D. Jones and P. P. Klinger                                                                                                                | Programmable High Speed Digital Phase Locked Loop                                                                                        |
| 5,313,536 | F. Rossi and W. Straehle                                                                                                                     | Modular Photonic Waveguide Distribution System                                                                                           |
| 5,313,589 | J. E. Donaldson, G. G. Floryance, and S. A. Schmitt                                                                                          | Low Level Device Interface for Direct Access Storage Device Including Minimum Functions and Enabling High Data Rate Performance          |
| 5,313,592 | M. F. Buondonno, C. N. Kindell, K. L. Milsted, and B. E. Yoder                                                                               | Method and System for Supporting Multiple Adapters in a Personal Computer Data Processing System                                         |
| 5,313,593 | E. H. Barakat, A. L. Chin, and E. B. Schorn                                                                                                  | Personal Computer System with Bus Noise Rejection                                                                                        |
| 5,313,613 | S. L. Gregor                                                                                                                                 | Execution of Storage-Immediate and Storage-Storage Instructions within Cache Buffer Storage                                              |
| 5,313,627 | N. Amini, B. F. Boury, S. Brannon, and R. L. Horne                                                                                           | Parity Error Detection and Recovery                                                                                                      |
| 5,313,629 | R. L. Abraham, R. E. Moore, W. L. Rich, F. W. Shackelford, J. R. Tiller, Jr., C. A. Ross, and R. S. Briggs, Jr.                              | Unit of Work for Preserving Data Integrity of a Data-base by Creating in Memory a Copy of All Objects Which Are to Be Processed Together |
| 5,313,634 | J. Eickemeyer                                                                                                                                | Computer System Branch Prediction of Subroutine Returns                                                                                  |
| 5,313,638 | D. M. Ogle and E. H. Williams, Jr.                                                                                                           | Method Using Semaphores for Synchronizing Communication Between Programs or Processes Resident in a Computer System                      |
| 5,313,640 | B. C. Beardsley, D. L. Leigh, C. D. Starrett, and J. R. Wolfe                                                                                | Method and System for the Efficient Response to Multiple Different Types of Interrupts                                                   |
| 5,313,645 | D. B. Rolfe                                                                                                                                  | Method for Interconnecting and System of Interconnected Processing Elements by Controlling Network Density                               |
| 5,313,649 | Y. Hsu and R. D. Jackson                                                                                                                     | Switch Queue Structure for One-Network Parallel Processor Systems                                                                        |
| 5,314,346 | G. R. Owens, R. J. Reis, R. G. Shomo, and S. D. Wickus                                                                                       | Flexible Circuit Applique Patch Customization for Generic Programmable Cable Assemblies                                                  |
| 5,314,709 | F. E. Doany, G. W. Grube, and R. Saraf                                                                                                       | Unzippable Polymer Mask for Screening Operations                                                                                         |
| 5,314,841 | F. T. Brady and N. F. Haddad                                                                                                                 | Method of Forming a Frontside Contact to the Silicon Substrate of a SOI Wafer                                                            |
| 5,315,142 | A. Acovic, C.-H. Hsu, and B. S. Wu                                                                                                           | High Performance Trench EEPROM Cell                                                                                                      |
| 5,315,151 | C.-M. Hsieh, L. L. Hsu, and V. J. Silvestri                                                                                                  | Transistor Structure Utilizing a Deposited Epitaxial Base Region                                                                         |
| 5,315,167 | Y. H. Chan, A. R. Pelella, and W. R. Reohr                                                                                                   | Voltage Burn-In Scheme for BiCMOS Circuits                                                                                               |
| 5,315,284 | S. R. Bentley, R. A. Hutchins, C. M. Melas, and P. Sutardja                                                                                  | Asynchronous Digital Threshold Detector for a Digital Data Storage Channel                                                               |
| 5,315,310 | D. J. Eagle and A. J. Morrish                                                                                                                | Cathode Ray Tube Display Apparatus                                                                                                       |

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| 5,315,314 | R. B. Harrison and R. T. Wood                                                                                         | Video Display System Storing Unpacked Video Data in Packed Format                                              |
| 5,315,463 | G. N. Dew, A. R. Hearn, D. J. Sebborn, and J. T. Young                                                                | Disk File Having Thermal Expansion Ring for Ensuring Disk/Hub Concentricity                                    |
| 5,315,464 | H. Tsujino                                                                                                            | Disk Apparatus and Manufacturing Method Thereof                                                                |
| 5,315,468 | T. Lin, J. K. Howard, C. Hwang, D. Mauri, and N. Staud                                                                | Magnetoresistive Sensor Having Antiferromagnetic Layer for Exchange Bias                                       |
| 5,315,498 | M. A. Berrios and K. R. Covi                                                                                          | Apparatus Providing Leading Leg Current Sensing for Control of Full Bridge Power Supply                        |
| 5,315,504 | P. Lemble                                                                                                             | Electronic Document Approval System                                                                            |
| 5,315,517 | K. Kawase, S. Ishikawa, and S. Asaka                                                                                  | Machine with an Active Sensor                                                                                  |
| 5,315,540 | W. F. Lawless                                                                                                         | Method and Hardware for Dividing Binary Signal by Non-Binary Integer Number                                    |
| 5,315,568 | J. J. Dente, G. A. Jacquette, and W. C. Williams                                                                      | Apparatus and Method for Accessing Sectors of a Rotating Disk                                                  |
| 5,315,604 | G. Chiu, R. N. Singh, and J. S. Wilczynski                                                                            | Optical Structure for Adjusting the Peak Power of a Laser Beam                                                 |
| 5,315,622 | J.-C. Abbiate, A. Blanc, and G. Ungerboeck                                                                            | Data Circuit Terminating Equipment (DCE) Including Timing Arrangements Circuits Controlled by Processing Means |
| 5,315,667 | T. Fujisaki, J. Kim, G. J. Leibman, and C. C. Tappert                                                                 | On-line Handwriting Recognition Using a Prototype Confusability Dialog                                         |
| 5,315,679 | C. F. Baldwin, D. B. Howe, and T. B. Kellerman                                                                        | Optical Fibers Duplex Connector Assembly                                                                       |
| 5,315,701 | P. D. DiNicola, J. Kantz, O. M. Rahim, D. A. Rice, and E. M. Ruddick                                                  | Method and System for Processing Graphics Data Streams Utilizing Scalable Processing Nodes                     |
| 5,315,749 | A. Nenadic, K. Furman, and R. W. Pasco                                                                                | Method for Holding Substrates                                                                                  |
| 5,315,751 | R. Hammer                                                                                                             | Method of Fabricating a Combined Linear-Rotary Direct Drive Step Motor                                         |
| 5,315,928 | D. M. Bocinski, C. A. Kaufman, R. J. Kisacky, B. H. Kunz, L. A. Stone, J. Z. Raski, D. B. Schaefer, and D. A. Schmidt | Band Line Printer with Grooved Platen                                                                          |
| 5,316,235 | D. G. East, S. L. Felde, P. Y. Hu, and G. S. Robles                                                                   | Tape Cartridge with Mount Plate                                                                                |
| 5,316,281 | R. E. Bale, J. M. Banks, M. R. Clearman, Jr., J. C. Colson, J. M. Crisp, D. C. Loose, and J. E. Varan                 | System and Method for Monitoring a Document Assembly System                                                    |
| 5,316,573 | V. A. Brusic, G. S. Frankel, T. A. Petersen, B. M. Rush, and A. G. Schrott                                            | Corrosion Inhibition with Cu-BTA                                                                               |
| 5,316,615 | M. W. Copel and R. M. Tromp                                                                                           | Surfactant-Enhanced Epitaxy                                                                                    |
| 5,316,787 | R. F. Frankeny and R. L. Imken                                                                                        | Method for Manufacturing Electrically Isolated Polyimide Coated Vias in a Flexible Substrate                   |
| 5,316,788 | E. P. Dibble, S. L. Hanakovic, V. R. Markovich, D. S. Niedrich, G. P. Vlasak, R. S. Zarr, and R. C. Senger            | Applying Solder to High Density Substrates                                                                     |
| 5,316,803 | R. T. White, Jr. and R. E. Ruane                                                                                      | Method for Forming Electrical Interconnections in Laminated Vias                                               |
| 5,316,958 | B. S. Meyerson                                                                                                        | Method of Dopant Enhancement in an Epitaxial Silicon Layer by Using Germanium                                  |
| 5,317,081 | J. D. Gelorme, D. A. Lewis, and J. M. Shaw                                                                            | Microwave Processing                                                                                           |
| 5,317,183 | C. R. Hoffman and J. M. Mullen                                                                                        | Substrate Noise Coupling Reduction for VLSI Applications with Mixed Analog and Digital Circuitry               |
| 5,317,190 | A. J. Fleischman, N. E. Lustig, and R. G. Schad                                                                       | Oxygen Assisted Ohmic Contact Formation to N-Type Gallium Arsenide                                             |
| 5,317,208 | D. C. Banker, T. A. Carlson, J. A. Dorler, P. D. Hendricks, W. S. Klara, F. M. Masci, and J. R. Struk                 | Integrated Circuit Employing Inverse Transistors                                                               |
| 5,317,306 | R. L. Abraham and V. J. Osisek                                                                                        | System and Method for Dynamic Control of Horizontal Scrolling                                                  |
| 5,317,338 | W. I. Doxsey, J. J. Masten, Jr., R. M. Schroedl, and D. G. Will                                                       | Visual Measurement Technique and Test Pattern for Aperture Offsets in Photoplotters                            |
| 5,317,462 | Y. Kakizaki, H. Kitahori, and K. Takada                                                                               | Cover Seal for Magnetic Disk Enclosure Having Stepped Mating Surfaces                                          |
| 5,317,477 | J. B. Gillett                                                                                                         | High Density Interconnection Assembly                                                                          |
| 5,317,528 | E. Gofman                                                                                                             | Random Number Generator                                                                                        |
| 5,317,541 | Y. H. Chan                                                                                                            | Bit Decoder for Generating Select and Restore Signals Simultaneously                                           |
| 5,317,550 | T. Semba                                                                                                              | Apparatus and Method for Track Access                                                                          |

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| 5,317,565 | R. S. Crouse, J. J. Cazzolla, L. L. Chang, M. M. Hurtado, K. D. Nguyen, J. L. Rivero, J. J. Ruiz, and L. Salcedo           | Method of Sequencing Bus Operations in a Simplex Switch                                                                                                          |
| 5,317,638 | C. Y. Kao, J. P. Kuruts, and S. K. Kodukula                                                                                | Performance Enhancement for ANSI X3.92 Data Encryption Algorithm Standard                                                                                        |
| 5,317,657 | A. R. Gallo, J. J. McDonough, G. J. Robbins, and R. R. Shaw                                                                | Extrusion of Polymer Waveguides onto Surfaces                                                                                                                    |
| 5,317,676 | S. M. Austvold, J. P. Bigus, J. D. Henckel, and P. A. Hospers                                                              | Apparatus and Method for Facilitating Use of a Neural Network                                                                                                    |
| 5,317,682 | W. L. Luken, Jr.                                                                                                           | Parametric Curve Evaluation Method and Apparatus for a Computer Graphics Display System                                                                          |
| 5,317,683 | D. J. Hager, R. P. Resch, and C. G. Rose                                                                                   | Method and Apparatus for Automated Meeting Agenda Generation in a Data Processing System                                                                         |
| 5,317,687 | R. J. Torres                                                                                                               | Method of Representing a Set of Computer Menu Selections in a Single Graphical Metaphor                                                                          |
| 5,317,692 | J. L. Ashton and K. E. Karlsson                                                                                            | Method and Apparatus for Buffer Chaining in a Communications Controller                                                                                          |
| 5,317,695 | J. Celi, Jr.                                                                                                               | Method and System for Permitting Communication Between a Data Processing System and Input Pointing Devices of Multiple Types                                     |
| 5,317,696 | R. B. Hilgendorf                                                                                                           | Bus Arbitration Scheme                                                                                                                                           |
| 5,317,705 | P. M. Gannon, P. H. Gum, R. E. Hough, and R. E. Murray                                                                     | Apparatus and Method for TLB Purge Reduction in a Multi-level Machine System                                                                                     |
| 5,317,716 | L. Liu                                                                                                                     | Multiple Caches Using State Information Indicating If Cache Line Was Previously Modified and Type of Access Rights Granted to Assign Access Rights to Cache Line |
| 5,317,722 | W. O. Evans                                                                                                                | Dynamically Adapting Multiple Versions on System Commands to a Single Operating System                                                                           |
| 5,317,728 | G. J. Tevis and E. J. Waldo                                                                                                | Storage Management of a First File System Using a Second File System Containing Surrogate Files and Catalog Management Information                               |
| 5,317,729 | S. K. Mukherjee, J. L. Ryan, and J. R. Wason                                                                               | Method for the Storage of Multi-versioned Data with Retrieval Based on Searched Query                                                                            |
| 5,317,730 | R. E. Moore, M. K. Nix, and F. W. Shackelford                                                                              | System for Modifying Persistent Database Based Upon Set of Data Elements Formed After Selective Insertion or Deletion                                            |
| 5,317,731 | D. M. Dias, A. Goyal, and F. N. Parr                                                                                       | Intelligent Page Store for Concurrent and Consistent Access to a Database by a Transaction Processor and a Query Processor                                       |
| 5,317,739 | D. A. Elko, J. A. Frey, J. F. Isenberg, Jr., J. M. Mick, J. P. Strickland, M. D. Swanson, A. A. Helffrich, and B. B. Moore | Method and Apparatus for Coupling Data Processing Systems                                                                                                        |
| 5,317,749 | D. J. Dahlen                                                                                                               | Method and Apparatus for Controlling Access by a Plurality of Processors to a Shared Resource                                                                    |
| 5,317,754 | G. O. Blandy, L. C. Heller, and R. E. Murray                                                                               | Method and Apparatus for Enabling an Interpretive Execution Subset                                                                                               |
| 5,317,757 | J. A. Medicke and P. Posharow                                                                                              | System and Method for Finite State Machine Processing Using Action Vectors                                                                                       |
| 5,318,212 | D. J. Becker, B. B. Hanson, D. E. Hora, and J. L. Peacock                                                                  | Method and Apparatus for Manufacturing a Printed Circuit Card and Connector Assembly                                                                             |
| 5,318,663 | T. N. Buti and J. F. Shepard                                                                                               | Method for Thinning SOI Films Having Improved Thickness Uniformity                                                                                               |
| 5,318,687 | S. A. Estes, T. B. Faure, and S. C. Nash                                                                                   | Low Stress Electrodeposition of Gold for X-ray Mask Fabrication                                                                                                  |
| 5,318,803 | H. R. Bickford, D. A. Canfield, A. E. Graham, S. L. Tisdale, and A. Viehbeck                                               | Conditioning of a Substrate for Electroless Plating Thereon                                                                                                      |